Persistent Systems, LLC Form 442 Experimental License Application File No. 0613-EX-CN-2019

## NARRATIVE EXPLANATION OF OPERATION AND NATURE OF APPLICANT

Persistent Systems, LLC, a Limited Liability Company based in New York City, is an American manufacturer of high speed, secure data networking equipment for both military/defense and industrial, non-government applications. Principally, Persistent manufactures scalable mobile networking systems based on Wave Relay MANET (Mobile Ad Hoc Networking) Technology. Persistent's products permit voice, video, and situational awareness to mobile users with no reliance on fixed infrastructure. For more than a decade, Persistent has been a pioneer in developing advanced MANET technology and commercializing it in the Defense and Industrial sectors.

Persistent has ongoing R&D activities to develop MANET products for Army, Navy and other Defense Department deployment which necessitates a longer period of testing and deployment at its facilities at Columbia River Gorge than is available pursuant to Special Temporary Authority. An Experimental license for equipment similar but not identical to that requested herein was granted recently. See, WJ2XWT, File No. 0898-EX-CN-2018. However, it is necessary to test tracking and other antenna designs over a two-year period and therefore an Experimental license is sought now for two frequency ranges for production of equipment for Federal agencies only. This is entirely terrestrial operation proposed to be conducted with respect to radio modules in the bands 2200-2290 MHz and 4335-4455 MHz which will be for MANET systems and component products for military deployment only using the antennas under test. Using a 20 megahertz occupied bandwidth emission within these bands provides a consistent benchmark for testing and evaluation in this environment. Frequency changes can be conducted remotely should the need to do so arise to avoid interference. All operation will cease immediately in case of any reported interference and not resume until the complaint is resolved to the reasonable satisfaction of the complainant. The operating parameters are worst-case using directional antennas. There are mobile units with ERPs of 33 watts using omnidirectional antennas as well as those with higher ERP levels as specified with the same Transmitter Power of 10 watts.

The stop buzzer contact for this operation is Ms. Temeasha Scott, RF Network Engineer at Persistent Systems, LLC, who can be reached at 646-518-8966, or by mobile phone at 706-409-6820. Her e-mail address is <a href="mailto:textott@persistentsystems.com">textott@persistentsystems.com</a>.

Other inquiries can be directed to communications counsel for the applicant:

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